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# Implementation Plan for Mobile resource Planing Software

Case study

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<p>This Thesis develops an implementation plan proposal for resource planning software mSiisti in the case company. Msiisti is a component that can increase competitiveness and improve the decision making as well as improving effectiveness and efficiency in operations of the case company. However the lack of better knowledge of implementation could jeopardise the whole implementation process.</p> <p>The objective of this thesis project is to propose a systematic implementation plan to integrate mSiisti into true practical use in order to realize its benefits. The focus is to understand the challenges that surround the introduction of a new system that triggers change of management in an organization and find ways of fast tracking implementation especially in Information Technology related case.</p> <p>This study applies a descriptive single case study method. The current state of mSiisti usage and how was implemented is analyzed and the data collected by interviewing employees from different functions of the case company. The findings from the current state analysis are then combined with the findings from the literature and best practice and the initial implementation plan is built. The initial implementation plan is then validated by the Service Director of the case company , and the final version is created</p> <p>The output of this Thesis is a proposal of implementation plan of mSiisti for the case company. The implementation plan defines the implementation phases, methods of involving the stakeholders in change process and also defines the role and responsibilities in IT implementation projects. These elements are also allocated the timeline to enable the schedule the implementation process in the case company.</p> <p>The case company can benefit from the output of the study by putting it in practice. Simply by approaching the implementation in a project concept where the whole implementation will be executed in stages with different activities. These activities are shared among the stakeholders who are accountable for their jurisdiction</p>	
Keywords	Information technology, project management

## PREFACE

The masters program that leads to this study has been an experience and great opportunity. The opportunity to reflect on how to deal with different challenges in work life. The study has also given knowledge that can be useful in my future endeavors.

I take this opportunity to thank my instructors Dr. Thomas Rohweder, and Sonja Holappa, Senior Lecturer at Helsinki Metropolia University of Applied Sciences for their guidance and insightful assistance during the study. I also express my gratitude to all the instructors in the program for sharing knowledge, skills and hope. I also acknowledge my study mates for the comfort and encouragement during this long journey we took together. To workmates who contributed to the success of this study by offering their feedbacks and opinions, I appreciate.

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Espoo, 18 May 2016

Gichuru Joseph

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## 1 Introduction

The purpose of this Master's Thesis is to explore human resource planning that utilizes mobile software in order to ease the resource planning and to facilitate organizing the everyday work in a cleaning company.

Resource planning is a management function that exists in all industrial organizations. The tools used in resource planning enable the management to make informed decisions concerning the personnel, communicate more effectively and also understand the essential needs of their firm. Resource planning involves a process whereby the management changes the current manpower position to desired manpower position that fits the organization. Through effective planning the management can ensure it has the right number and the right kind of personnel, at the right place and at the right time doing the right thing which, as a consequence, benefits both the individual and the organization.

The challenges of resource planning are not unknown to most industries. Maintaining the staff records of a workforce of hundreds of employees with a high turnover can be challenging and frustrating. In addition, these organizations have several services which are often tailored according to customers' preferences. This makes the management of the service delivery and reporting to the workforce even more complex and cumbersome. Fortunately, the evolving technological knowhow has provided several solutions and in particular within the Information Technology. Information Technology has enabled organizations to store both personnel's and customers' data in databases through digitization. This data can be retrieved and integrated in electronic devices like mobile phones to ease the company's operations. The aim of this study is to look into one of these solutions, namely mSiisti, which the case company is in the process of implementing. In order to better understand the challenges faced by the cleaning companies with regard to resource planning, this Thesis explores concepts such as, management of human resources and specifically, resources planning and mobile resource planning software.

mSiisti is a mobile service that simplifies the complex nature of organizing employee's work in the office and in the field. It serves all different parties in the cleaning sector. In



management it improves speed, accuracy and efficiency. This is thanks to the information collected which can help in decision making and developing activities. To field managers, it offers real time tracking of employees, saves time and simplifies the planning of resources. To the work force it eases the access of information. mSiisti's purpose is to ease the everyday operations of the cleaning industry.

### 1.1 Case Company Background

The case company in this study was founded in 2002 as a cleaning company that initially operated in all parts of Finland. In recent times it has narrowed its operations to the great Metropolitan area. It offers a wide range of cleaning services to both private and public sectors. The company has secured contracts with governmental and private entities.

The company's competitive advantage comes from expertise, flexibility and strong customer focus. The company offers its customers the ability to customize their required services. It has continuously developed its services with its customer, and as a result has gained some market share in various sectors in the cleaning business.

### 1.2 Business Challenge

The case company offers services that vary from place to place, simply because they are tailored according to client's demands. These tasks are undertaken by different workers who need these specific details. The mobile service, mSiisti, is supposed to be used in managing the shifts for the workers and monitor the progress of the services in real-time. Managing these specific details has proved challenging to the field managers due to the fast growing number of customers and employees. The management is supposed to plan the shifts for the workers and tasks to be undertaken on a daily basis. The shifts and other required information is sent to the worker's mobile phone through NFC technology.

The main business challenge is that mSiisti has been taken into use more or less on an ad-hoc basis, but true practical implementation has been very slow. Thus, the purpose of this Thesis is to propose a systematic implementation plan to integrate mSiisti into true practical use in order to realize its benefits.

### 1.3 Objective, Outcome and Scope

The objective of this thesis project is to identify the challenges related to the incomplete implementation of mSiisti and to find solutions for its implementation. The outcome is a proposal of a systematic implementation plan to integrate mSiisti into true practical use in order to realize its benefits. The system has the potential to integrate most of the company functions from categorizing services, shift management, billing and collection of feedback from the customers.

The research focuses on the cause of delay of full implementation of the software. In particular, the aim is to study how implementation has been carried out so far, what the best practices in resource planning software implementation are and finally to integrate all of this for a successful implementation plan acceptable to the case company.

### 1.4 Thesis structure

This paper is written in seven sections. Section 1, defines the case company, research problem, objectives and the gives background information of this thesis. Section 2, methods and material, outlines the research Methods and Design. It gives details on how the thesis is carried out. Section 3 ,Current State Analysis, explain the implementation of mobile resource planning software status in the case context. Section 4, Best practices of implementing IT systems presents best practices and literature on implementation of Information Technology systems and change management that will be summarized in conceptual framework of this study.. Section 5, the conceptual framework will be used in building the initial implementation proposal. Section 6 & 7 discusses and concludes the research by evaluating the initial implementation plan, improving it according to feedback and finally highlighting the practical implications of the study that can assist in ensuring effective and efficient implementation of the resource planning software.

This next section defines the research methodology of this Thesis and describes how relevant information is collected and analyzed.

## 2 Method and Material

This section outlines the research method, research design and data collection in this thesis. The case study research approach will be used as well as qualitative research methodology. This section also explains the reasoning behind the research method methodology chosen for this study

### 2.1 Research Approach

This study follows the case study research approach. It is a single-case design which utilizes qualitative interview data. This approach is used in understanding complex issues, by determining and defining the research questions. It therefore fits the business challenge in this study which uses the qualitative method in collecting data. The approach also puts emphasis on the analysis and evaluation of data collected and compares it to best practices in relevant literature to come up with a proposal for the case company.

### 2.2 Research Design

The research was carried out by first by interviews and later discussions. These interviews were selected to obtain a good overview of the informants' perspective to the project. It was important to retrieve information from all stakeholders already involved in the ad hoc implementation of this project. The discussions will be used to evaluate and analyse the interviews findings.

The research design of this Thesis is shown in Figure 1 starting with the definition of the research objective. The data collection was carried out through interviews, with a focus on the current progress of the implementation of the software. The findings from the interviews will be considered for the literature review combined with best practises and discussions in order to build an initial proposal for proper implementation. The research design includes the final data collection that will include validating meetings to come up with the final proposal of the implementation plan.

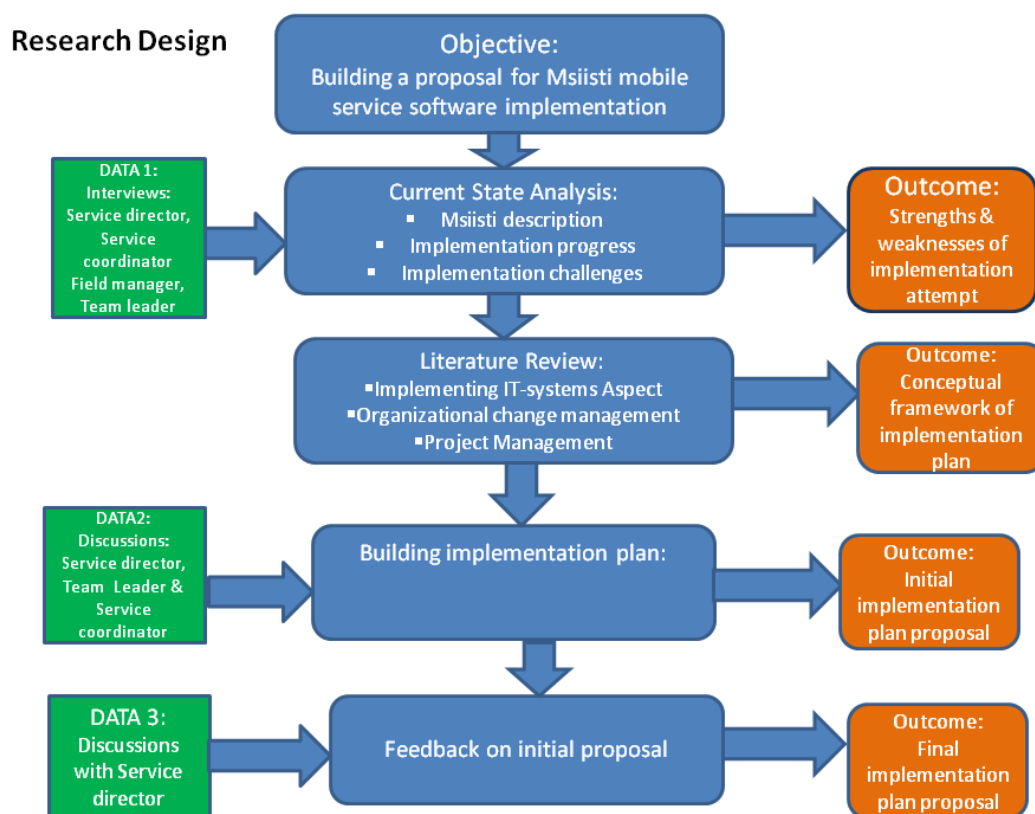


Figure1. Research design

The data gathering process started with an overview and guidelines from the master's program teachings. The selected key potential informants, altogether four, are employees in the case company. These informants hold a key role in the implementation project. One of them is from Operations and the other from the Human Resources department. The first one is the case company's Service Director and the second Service Coordinator. These two were selected in this study for their role in facilitating the initial attempt of implementing MSIISTI. The other two informants, a Field Manager and Team Leader, come from field operations. These are the main users of the mobile service system. The field managers are responsible for defining the services and making the shifts for the cleaners. Additionally, the team leader leads a couple of cleaners and s/he is responsible for service executions in different given locations. All these informants participated in the study voluntarily.

The research phases are shown in Figure 1 above as follows. As can be seen, the Current State Analysis concentrates on the implementation challenges in order to understand the scope of the problem. Consequently, the literature review focuses on best

practices in software implementation and change management in order build a solid theoretical foundation for the problem at hand. The Conceptual Framework, together with the findings of the CSA, will then be used to come up with the initial proposal for the implementation. After this, feedback is collected on the initial proposal and fine-tuned through discussions with the Service Director and Service Coordinator, in Data 2. Data 3 will be collected from the Service Director who has enough knowledge and experience in the case company. The main agenda will be to cross check whether the research outcome is in line with case company policies and within the strategic approach of the company's service delivery. Finally, based on the feedback, the final proposal is made.

### 2.3 Data Collection and Analysis

This research is carried out using three different data. The first data is collected by interviewing (several)\* persons in different positions in the case company. These are the personnel who have been involved in the implementation of MSiisti. Table 1 below presents the details of the interviews.

<b>Data 1</b>	<b>Position</b>	<b>Data collected</b>	<b>Date</b>	<b>content</b>	<b>duration</b>	<b>Documented</b>
1a	Service director	face-to-face	29 <sup>th</sup> Jan 2016	Implementation Concern	35min	field notes & recorded
1b	Service coordinator	face to face	29 <sup>th</sup> Jan 2016	Implementation Progress	50min	field notes & recorded
1c	Field manager	face-to-face	5 <sup>th</sup> Feb 2016	Implementation concern	55 min	field notes
1d	Team leader	face-to-face	9 <sup>th</sup> Feb 2016	Implementation concern	1h	field notes
1e	Cleaner	face-to-face	18 <sup>th</sup> Feb 16	implementation concern	30min	field notes
1f	group of cleaners	discussion	3 <sup>rd</sup> March	implementation	40 min	field notes

Table 1.Data 1 Interview details

The interviews were carried out in different locations and on different dates. The first two interview meetings were carried out on 29 January 2016 in the case company offices. The third interview meeting took place on 5 February in O' Leary's in Sello and the last data 1 meeting took place in Suviza restaurant on 9 February. In all interviews field notes were used as a data gathering method.

The interview theme was Implementation challenges although with a slightly different emphasis on certain questions depending on the involvement and individual roles of the interviewees in the company. Even though the theme was the same for all the interviews, the researcher guided the interview with open-ended questions so as to gather a wide view of the subject. The questionnaire can be found in Appendix 1.

	<b>Data 2 source</b>	<b>Content</b>	<b>Outcome</b>	<b>informants</b>	<b>Date/Duration</b>	<b>Documented</b>
2a	Discussion	CSA & CFW	Building ideas	Cleaner	13/4/2016 25min	field notes
2b	Discussion	CSA & CFW	Building ideas	Service Coordinator	14/4/2016	field notes
2c	Discussion	CSA & CFW	Building ideas	Team Leader	18/4/2016 50 min	field notes
<b>3</b>	<b>Data 3 source</b>	Improving ideas & Validation	improving ideas	Service Director	22/4/2016 1h	field notes

Table 2. Data collection for Data 2 & 3

The Table 2 presents both Data 2 and Data 3 collection details. Data 2 content is based on both the Current State Analysis results and Conceptual framework to co-create building ideas with the respondents. While Data 3 was based on initial implementation plan proposal so as to receive improvement ideas. The discussions were documented as field notes for further analysis, validity and reliability purposes

## 2.4 Validity and Reliability Plan

Reliability is the extent to which the research results are consistent over a given number of times and accurate of the people under study if the result can be reproduced under similar methodology (Golafshani 2003). It can also be defined as the degree to which an assessment tool produces stable consistent results (Phelan and Wren 2006).

Validity, relates to addressing the research question and finding precise and certain answers to this question. In valid research, the data is accurate, correctly interpreted and answers the intended research question. Furthermore, valid research ensures that the results are actually measuring what they are supposed to measure. (Golafshani 2003)

This thesis ensures validity by clearly defining the business context, objective and outcome. The structure of the study will follow the linear case study research logic that will make it easier to identify and evaluate. The data collection will be sufficient and relevant data. Firstly, it will be collected from the relevant people, n=9 people altogether, with the knowledge of the MSiisti implementation. Secondly the main content of the interviews will dwell on the key challenges that the implementation has been suffering from. Thirdly, the findings and conclusions will be presented to case company informants to be reviewed and commented before publishing the final outcome.

Finally, the reliability plan of this thesis is to triangulate the data collection in order to reduce errors while analyzing. Similarly, the data collection will be from different respondents being asked the same questions in the interviews to enable verification of the key findings.

On the final phases of this thesis validity will be evaluated especially on the initial implementation proposal by the experts. In addition the findings from literature review and best practices will be considered in developing the final proposal to enhance the validity.

The next section presents the Current State Analysis carried out in this study in order to identify the weaknesses in the implementation of the mSiisti mobile software in the case company.

### 3 Current State Analysis

This section presents a description of mSiisti, the current progress of the software implemented and the challenges of implementation as revealed by the Current State Analysis. The CSA is carried out by interviewing relevant people at the case company on the theme of Implementation challenges. In order to understand what the implementation challenges are all about, a detailed description of mSiisti is needed.

#### 3.1 Description of mSiisti

mSiisti is a mobile service software used in the cleaning industry. It uses cloud computing to deliver computing resources over the Internet. mSiisti services work only with smart phones which have Near Field Communication (NFC) technology and specifically in Android operating system to connect with the users. NFC is a wireless connectivity that enables convenient short range communication between electronic devices. The service consists of three layers. One is the server side which is maintained remotely by the service provider. The second is the web based interface that is embedded on the web browser of a personal computer and maintained by the company's management. The third is the mobile application that communicates through the Internet and with the RFID (Radio frequency Identification) tagging system. The tagging system has the following components; the tag itself, a read/ writes device, and a host system application for data collection, processing and transmission. The RFID tagging system uses small radio frequency identification devices for identification and tracking purposes. The layout is shown in Figure 2.





Figure 2. mSiisti Layout

Figure 2 above describes the layout of mSiisti service delivery. The service is in the cloud and its computing capability is enabled through the Internet. Personal computers and the smart phones are used to transmit and process data through the Internet. The phone uses NFC technology to communicate with the RFID tagging system. The tags are attached to each customer premises and attached to each employee's identity card.

### How it works

The management prepares shifts for the cleaners in various customers' premises. The shifts define and describe the tasks in an orderly manner. The shift data is stored in the mSiisti software. The cleaner gets access to the stored information through a smart phone by first logging in through a personal RFID tag. The signing in process is done by bringing the tag and smart phone close to each other while ensuring the NFC in the phone is ON and well configured. The application will fetch the personal identification data and will allow information access. At this point the cleaner is logged in the system and can see which customer he/she is serving for the day. In customer premises, he can now sign in the customer through the customers' tag and can see all the tasks for the day. After the task is completed the cleaner can end the task by bringing the phone back to the customer' tag and repeat the process. Once all tasks are finished the cleaner can send any other information regarding that customer by sending it through

the messaging feature in the mSiisti application and sign out from the customer's premises. The system transmits all information in real-time to the management dash board.

mSiisti is designed to ease taking care of the hectic daily routines for all employees of the company in the cleaning sector in both the field and in the office. It speeds up the performance of daily routine tasks and saves time for the actual cleaning time. The service allows the planning and reporting functions, and the latest information on the customer visit information is immediately available in real-time to all who have access to it. It also reduces costs by recognizing the customer visit and avoiding repetitive reporting and unnecessary trips to customers' premises from the office.

The software serves all different parties in the cleaning sectors. In management, paperless work brings speed, accuracy and efficiency, which is reflected in both productivity and customer satisfaction. Reporting no longer lags behind the holidays, but is constantly updated. Enhanced reporting free up resources to work on improving the results. Information on the overall activity that occurs around the work places is immediately available, thereby improving conditions for the development activities and reacting to unexpected situations. The overall workflow can be seen on a personal computer as illustrated in Figure 3 below.

### Management Dash Board



Figure 3. Management Dash board

The service instruments give important real-time information and key figures collected from the meter display, which support fast decision making in development activities.

To the field managers, it eases and offers real-time job monitoring capability. This gives options to design work in a flexible manner and ensures that employees are at the right place at the right time. It also enables to speed up billing after the tasks are done and reduces the paper work and saves time in travelling to confirm the jobs are completed. This helps the field manager to focus on work planning and development activities.

To the work force, the work duration and customer visits are reported conveniently while working through this simple mobile app without any paper notes. The data is entered directly on top of the smart phone, which has an easy to use interface. The required customer information and functions are available in a clear format and they are correct. Figure 4 shows the mSiisti application interfaces.



Figure 4, mSiisti Mobile Application

As indicated in Figure 4, the tasks required to be executed are shown in an orderly manner. Customers receive the reports of work undertaken and can be assured of the quality of work. They can also order an additional service conveniently without making any phone calls. In addition, the customers are informed about the visit details such as measures taken in their premises and time spent.

### 3.2 Implementation progress software implemented

The software has been deployed through the configuration of web based servers that execute the operations of the service. The management has been provided with the credentials and authentication details, the usernames and their passwords. This allows the top and middle management personnel to access their managerial dashboard on any computer. In addition it enables the management personnel's to input data and monitor the progress of the workflow. Some of the cleaners have also been provided with the tags that are used to identify the employee.

The management has asked the employees about the different phone models they have, so as to know whether they are compatible with mSiisti systems. Those who own compatible phones have received a link to download the mSiisti application. Some employees who did not have compatible phones and works in selected customers have been given such phones. The selected customers are key customers whose mSiisti implementation has been initiated. The work program and tasks for the selected customers have been defined and fed into the system. Although the number of these customers is still quite small. In addition, each customer premises have been provided with an RFID tag.

The customer and employee basic data has been fed into the system including information such as name, address, social security number, tax identification number and other confidential financial figures related to customer contracts.

The field managers have tried to use managerial dash board to enlighten on the basic features that enable them to enter customers' contract descriptions into the system. A small percentage of the customer data is already in the system, but a huge amount of data is still missing and in paper form.

In a nutshell, the implementation process of mSiisti is disorderly and only partially done. To start with, there is limited hardware to process the data. Only a small number of employees owns compatible phones. Secondly the required data in the system is minimal compared to what it is supposed to be due to lack of staffing. A huge percentage of the employees is not yet introduced to mSiisti. The mSiisti output have not yet been used for payroll and billing purposes as intended.

### 3.3 Identifying implementation challenges

The findings from the first data which was collected through interviews with several employees of the case company is described in this subsection. The theme of the questions was implementation concern and challenges of mSiisti as experienced in the case company. The interview questions were framed in a manner that corresponds to the individual experience and the role each interviewee played during the implementation process. The questions were designed to clarify how mSiisti was introduced to the company and why it has taken much too long for it to be fully integrated in the company's operations.

The results of the interviews which were carried out revealed some challenges faced during the implementation attempt. These include:

- Improper training
- Lack of involvement in system project
- General resistance to change
- Unclear roles and responsibilities

These challenges are discussed in detail below.

#### 3.3.1 Improper Training

The aspect of improper training came out clearly from every informant who participated in this research. There was no formal training for the implementation pilot project. The users were only introduced to the mobile application and no specific training was arranged. The users were left to navigate the application and learn from each other. Several informants indicated that training and education processes are one of the main challenges in the mSiisti implementation process. It is significant to ensure that all the users have been trained adequately. Below is a quote from one concerned informant showing deep frustration;

Training was not done well, they did not show how to use this program. Some of our workers do not even know how to log in and out. Also they tell us we put customers program and I don't know how. It is complicated to put all that information in there. And we should not be the one to put that information. And because of that if I try it takes a lot of time (Informant's 1c response, Data 1)

The lack of proper training denies any user of the new system the knowledge and skills to use that system. As a result of improper training the potential users lack the interest and morale to use the new system, in this case mSiisti.

Another identified factor that could have caused challenges in the implementation process was lack of guidelines on how to work with mSiisti. As one of the respondents stated. A successful implementation of a new system requires a pre-arranged training, so that people know what to expect from the system after it is launched. The training also helps to welcome the change and make it a culture in the company to use the system

### 3.3.2 Lack of Users involvement in system project

The second challenge was lack of involvement in the system project. This is related to training in that most of the users did not participate in the pilot project and this led to lack of interest. In addition, some users did not understand the need or importance of using mSiisti in their daily routine. The interview material shows there was no quality communication which is a success factor in change management. The project plans and goals need to be communicated in a timely manner and could have been done in training sessions which never happened as indicated by the quote below.

Involvement and communication about the objective was not well done, because the guys should have been explained about the whole project and expect those changes (Informant's 1d response, Data 1)

Due to the same reason, the use of mSiisti is seen as an unnecessary step by the users. This is because they feel it does not affect the real work and is used for information purposes only, as can be seen in the quote below.

Why do we need this and we know what to do (Informant's 1c response, Data 1)

This clearly indicates lack of motivation for the use of the new system. Motivation is created through other activities such as good communication, involvement, need for change and positive spirit. In this case, there were no motivational efforts used to encourage the key users to contribute to the success of mSiisti implementation.

### 3.3.3 General resistance to change

Another challenge identified in the interviews is general resistance to change. The reaction and reception varied greatly. Some users thought that it was interesting and some were questioning the purpose of mSiisti altogether. Most respondent expressed difficulties that come with a new system. For instance, introduction of mSiistii in the case company, where phone calls and paper work have been used for 10 years can be challenging.

The researcher heard all kinds of different reactions regarding the mSiisti project. Some didn't seem to care –“makes no difference to me”, some seemed happy about it – “it's going to be a great solution” while others were opposing –“we don't need this”(Informant's 1b response, Data 1).

The need for change requires commitment throughout the organization and needs to be communicated and elaborated regularly. The views from the informants did not show the need for change and the urgency of the mSiisti implementation.

### 3.3.4 Unclear roles and responsibilities.

Another challenge which was clearly identified was the confusion surrounding the introduction of mSiisti and its implementation. There were no clear roles defined during the implementation attempt and no one was responsible for the process or tasks needed to be undertaken regarding mSiisti. This can be seen clearly in the quote below by one of the respondents.

I don't even know who is supposed to be entering customer's work program and also following up whether the worker uses the application (Informant's 1c response, Data 1).



### 3.5 Summary of strengths & weaknesses of implementation

The mSiisti implementation is a complicated issue and involves both technical and managerial aspects. The aim of this subsection was to describe and present the challenges of the subject matter. The analysis highlighted the management aspect and left out technical issues. This is because the findings indicated the key challenges are in the change management process.

The interview analysis section has indicated clearly what the strengths and weaknesses for the case company to fully benefit from mSiisti are. The positive aspect is that the employees are willing to coordinate and cooperate if well informed of the purpose of the software and if well supported. On the other hand, the factors that have emerged are key to any system implementation success and change management issues.

The need to train employees is an obvious factor in change management. Similarly, it is important and essential to engage the users in implementing such a project. Finally it is crucial and critical to communicate the objectives of a new project in the company to avoid speculation and resistance to change. Table 3, below summarizes the current state analysis by presenting the weakness and strength of mSiisti implementation.

Weakness	Strengths
Unclear role and responsibilities	Data readily available
User's lack of involvement	Users willing to cooperate if involved
General resistance of change	
Improper training	

Table 3. Summary of Current state analysis

The results of the CSA have indicated the theoretical literature that needs to be studied in order to find relevant information to address the weaknesses in the implementation process. This theory will be discussed in the next section.



## 4 Best Practices of Implementing Software / IT Systems

This section is dedicated to reviewing relevant literature required for creating a solid understanding of the topic area to find solutions to the successful implementation of the mSiisti mobile application. The review consists of three main topic areas that will provide the grounding for creating the implementation plan for the case company. These topic areas include an overview on implementing IT systems, various implementation concepts and their challenges as well as defining roles and responsibilities in an IT implementation project and methods of involving participants in a change process.

### 4.1 Implementing IT systems overview

In general, the literature reveals that some organizations cannot carry out their work without utilizing Information Technology. Since the emergence of IT, some people have considered it as the cure to most organizational problems and in some cases seen it as the solution to eliminating poor performance in organizations. Most IT discussions consider it as an organizational solution provider forgetting that it also comes with its own problems and concerns. The implementation of IT systems is a process that requires systematic design and planning to fully benefit from its operations (Beaumaster 1999; 2).

Ciric & Rakovic (2010), claim that the majority of Information system deployment and implementation projects end in failure. They add that the implementation of projects demands attention and their management is impossible without considering change especially in IT related projects (Ciric & Rokovic 2010, 1).

Information technology is an essential part in many change processes. However, people are the ones who perform the real work and consequently suffer from change. Paper and Urgray suggest that technology helps people to be more effective in their work and share information more easily. Therefore, managers should help people also change. To be more successful they suggest that structures created by technology must be aligned with the change process (Paper and Ugray 2008: 4).

Beaumaster (1999) states that IT development and deployment process is important in an organization and demands direct attention from the leadership of the top management. In addition, this leadership should provide necessary support to the process and commit to it by allocating educational and personnel resources. Beaumaster adds that the lifecycle of the implementation process should take longer beyond development and deployment of IT systems and should continue also during the actual use of the information systems.

Chan (2000) presents IT implementation as a procedural business process due to the role it plays in an organization. He presents that the procedure needs an initiator, a facilitator, also an enabler. He claims that, an initiator assignment is to start an operation of change. A facilitator is an instrument which serves to control the assignment while an enabler offers the capacity that should accomplish the purpose of that assignment.

## 4.2 Implementing IT Systems Aspect

This subsection discusses the implementation process of IT systems and the challenges encountered during the implementation.

### 4.2.1 Implementation Process

Earlier literature on the implementation of information systems focused on the idea of fostering change by researchers like Pinto & Millet (1999) for instance. Some earlier models focused on the change phenomenon, viewing implementation of information systems as a dynamic process of gaining organizational acceptance. These models are Lewis/Schein Theory of Change (1952) and Kolb & Froham's (1970) model. Lewis and Schein argued that the focus should be on the organizational members who are affected by the new system. Their theory suggested three stages, i.e. unfreezing, moving and refreezing which were meant to prevent organization-wide resistance of change. Kolb & Froham added more stages on the Lewis/Schein Theory of Change to a change process that defined the nature of clients and user roles. The steps added were initial scouting, entry, planning, diagnosis, action, evaluation and termination (Pinto & Millet, 1999: 15)

Beaumaster (1999) views the IT implementation process as a package of three integral phases, where the success of each phase is critical for the next. Still, each phase has its own important process. Figure 5 shows the layout of an IT implementation process according to Beaumaster.

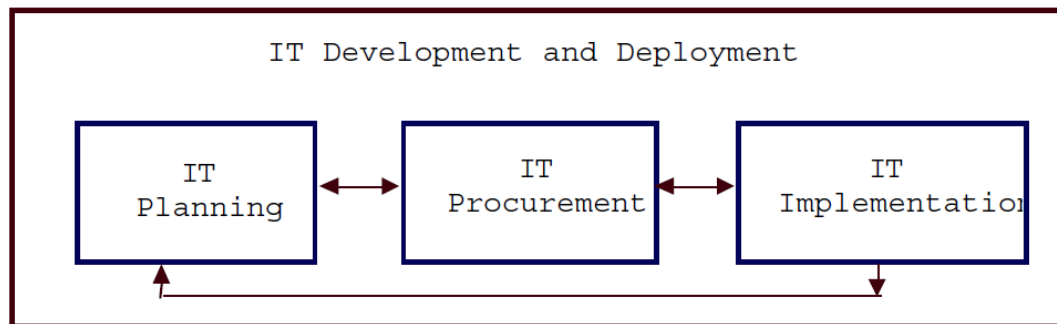


Figure 5; IT implementation process (source Beaumaster 2002:53)

As shown in Figure 5, in the implementation process planning comes first and it provides the start of the process for others to follow. After the planning phase comes procurement phase, where every detail and idea from IT planning is considered and the plan can be formalized and finally this is followed by implementation. All phases are related to each other and thus failure in one phase will affect the whole implementation process, and hence demands careful consideration in each phase (Beaumaster 2002:55).

Kuruppuarachchi, Mandal & Smith (2002) presented another implementation process with phases similar to Beaumaster process. However this model is divided into five workflow stages. The first stage is initiation followed closely by requirement and definition stage. Then it gives way to acquisition and development stage. The second from the last stage is implementation stage and finally termination. In addition, to the workflow, there should be an acceptable business objective, a clear way of change and risk oversight capability during the deployment process. Figure 6 below depicts the project phases and main functions.

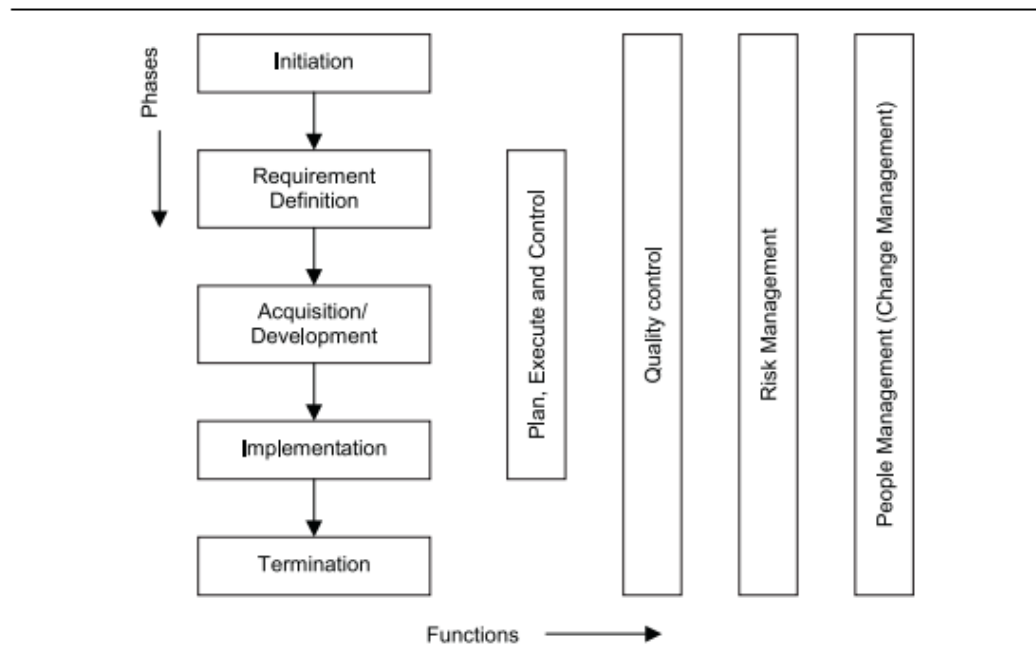


Figure 6. Project phases and main functions (source Kuruppuarachchi, Mandal & Smith 2002:128)

The most visible function in IT project is implementation phase. The project success or failure is always determined during this phase and it reflects the work done in other previous phases.

Unlike Beaumaster and Kuruppuarachchi, Mandal & Smith, Hyötyläinen (2013) describes IT system implementation as a gradual organization process, where learning steps are taken by the organization itself and the stakeholders who play different roles for the success of the implementation process. The implementation changes proceed from organizational activities through a dialogue process. This defines the implementation of information systems as an functional whereby different participants take part in solving a problem in stages. It is also defined as organizational learning due to the introduction of technical changes that require learning new ways of doing things in an organization. These organizational issues are crucial in information system deployment success. These issues are categorized to cover all aspects starting from the company's strategic planning all the way to the final stages of implementation (Hyötyläinen, 2013).

O' Brien & Markas (2011), on the other hand, present that the implementation of an IT system is a process of project management and they break it into five phases including initiating, planning, executing, controlling and closing. Each of these phases have dif-

ferent activities ranging from acquisition, testing, documentation, training and other conversion activities that transform a newly acquired system into an operational system for end-users (O'Brien & Markas 2010: 518).

IT systems implementation is a process of interdependent stages. Failing or a mistake at any of the implementation stages will lead to decrease in efficiency, effectiveness and increase other uncertainty in organizations. Some other factors related to implementation are required to fulfil the objectives. These include managing change, skills development, and training (Beaumaster 2002: 2).

This sub section has presented IT system implementation processes in different perspectives to provide some of the key element of this study. Next, the IT systems implementation challenges are expounded.

#### 4.2.2 IT systems Implementation challenges

It is critical to understand the parameters of why IT system implementation projects fail and their surrounding challenges. The failure rate for the information system development and implementation projects can be as high as 40% (Ćirić & Raković 2010, 23). Projects can be classified as failed if they exceed their implementation timeline and budget framework. Challenges are obstacles that either slow or hinder the smooth flow of the implementation process.

Beaumaster (1999) has grouped and selected the challenges that faces deployment process of information systems into five components. These components that complicates deployment and development process are leadership challenges, environmental challenges, process challenges, individual and technical challenges. (Beaumaster, 2002: 3). Figure 7 below shows IT systems challenges.

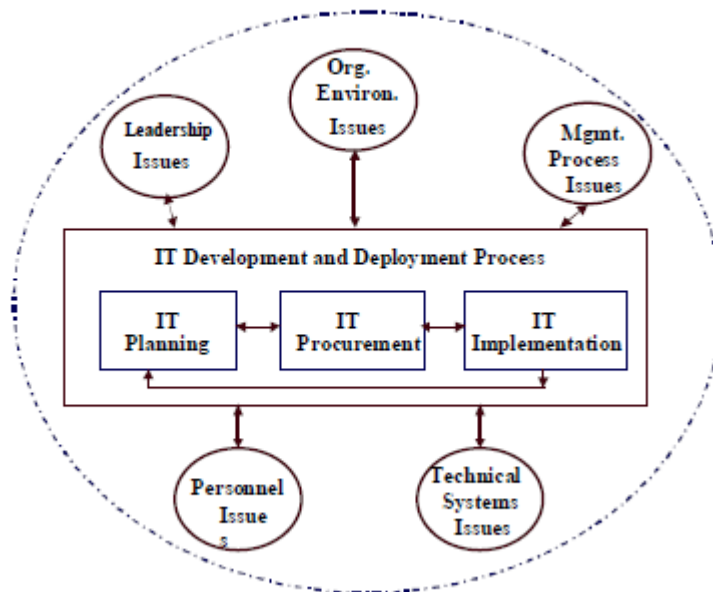


Figure 7, IT systems challenges (source Beaumaster, 2002:3)

Figure 7 above describes the issues surrounding IT system implementation. Leadership issues describe the areas that require executives to offer direction on the forward in an organisation. This includes inter functional facilitation and management support. This direction shows commitment and interaction involving the top management in IT implementation. On management process issues area corresponds to administrations and their role in facilitating duties in the organisations. The issues characterized as environmental are addressing problems that are intangible such as culture, change and behaviour of people involved in the IT implementation process. Technical issues relate to the software and hardware compatibility, specification and their requirement as defined with different technologies. Finally, personnel issues are factors that define every individual in an organisation and include personal feelings and other human related conditions.

All these problematic issues are experienced in all three processes of implementation from Planning, procurement and implementation. The issues are the cause of most implementation failures and they include rapidly changing technology, lack of implementation plan, and resistance to change. (Beaumaster 2002: 3)

Rapidly changing technology is a challenge for any implementation process. This is due to the lag time it creates between the planning and actual implementation. It takes long and by the time the plan is about to be executed the technology might be obsolete. (Beaumaster 2002: 3)

Resistance to change is a factor that challenges all aspects of Information Technology. The human and Information technology globally faces this problematic issue due to individuals fearing to be replaced by technology in their work place. This approach brings in fear into the implementation process and creates a resistance to change (Beaumaster, 2002:4). It can also be defined as an action taken by an individual or a group when they perceive that change is occurring as the threat to them. It can also be interpreted as inertia in human nature (Watson 1986). The presence of resistance will always prevail whenever a new system is introduced in an organization. In an IT implementation process it is important to overcome as much resistance to change as possible. To avoid resistance the reason for change must be explained and understood..

On the other hand , resistance to change is powerful reaction method used by potential users to resist introduction of a new system in most of IT implementations. It depends on how people adjust and react to technological change. Even more so it depends on their earlier experience, knowledge and involvement with IT implementation process. (Beaumaster, 1999).

Cooper (1999) defines the reasons for failure and poor quality in execution of projects in seven categories and calls them “blockers”. The list below presents the seven blockers.

1. Ignorance – lack of knowledge in managing a project
2. Missing of skills
3. Improper process guidance
4. Over confident that lead misguided operation
5. Missing of leadership and thus lacking of direction
6. Doing things in a rush
7. Too many projects and not enough resources.

In addition Gupta and Malik (2005) outline some major causes of success and failure in IT system implementation in Table 4 below.

Reasons for success	Reasons for failure
Engaging users	Lack of user input
Top management support	un elaborated specification details
Proper requirements definitions	Changing requirement and specification
Systematic planning	Lack of management support
Logical expectation	Incompetence

Table 4. Causes of IT failure (source Gupta & Malik 2005: 40).

The IT system implementation failure can cause additional cost in the form of elongated project, resources lost in the implementation attempt as well as tangible hardware and software acquired.



### 4.3 Defining roles and responsibilities in IT Implementation Project

The role of IT has changed from being a support technology to being something that needs to be managed in modern organizations. This is due to the complexity and size of ICT projects that have forced the management to change how IT is managed. IT has become a vital corporate resource and has to be managed with care and attention like any other organizational department. Today, a specific type of management is developed to implement ICT projects. In addition, a project management team is always created to cater for new projects in organizations (Milis & Mercken 2002: 106).

This always improves the change management models which do not use the concept of delegation of activities and responsibilities (Parker Charlton Ribeiro & Pathak 2013: 540).

#### 4.3.1 Project management

According to Ziemba & Obłąk (2015), Project management are techniques and ways used to facilitate the execution of project activities. It is achieved through processes such as initiating, planning, executing and evaluation.

Glaser (2004) argues that project management is a set of regulations and guidelines that are used deliver success in a coordinated operation. In addition, Glaser outlines the objectives of project management in the list as shown below:

- Outline the scope of intended result of the project
- Define the project decision making mechanism
- Define the project's task and task sequences
- Determine the project resources and time requirement of the projects
- Arrange an appropriate communication channels

To manage an IT project effectively several areas must be put into consideration. These areas are (1) Roles & responsibilities (2) committees (3) charters (4) plans and (5) status reporting (Glaser 2004: 34).

#### 4.3.2 Project Roles & Responsibilities

To manage the project effectively several roles must be defined and filled appropriately. Some of these roles and responsibilities are business sponsor, business owner, project manager, project committee and project team

**Business sponsor** is an individual in an organization who carries all accountability of the project. A sponsor is the one who receive the value of the project outcome after completion. According to Glaser (2004) the business sponsor has the following responsibilities: (1) Finance the project and provides resources (2) Makes the final decision and accounts for all the resources used in the project (3) champion the project in and out of the organization (4) Assist to define deliverables, aims, project success criteria (5) sort to eliminate any business challenge to the project schedule and outputs (6) Chair the meetings in project committee. The sponsor must align the project's vision to the intended results (Ciric & Rovic 2004: 26).

**Business owner** is an individual who has the day-to-day operation of a function or a department in an organization. Business owner has several responsibilities (1) Represent their department at the meetings held regarding the projects (2) Secure and coordinate resources in their respective departments (3) eliminate any challenges in their departmental schedules and expected results (Glaser 2004).

**Project Manager** is an individual who provides day-to-day direction, resolve conflicts related to projects and communicate anything to do with the project. A project manager can be either an expert or from business administration. The following responsibilities falls under the manager's docket: (1) Identify and obtain necessary resources (2) Deliver the project according to the timeline and within the budget and given specification (3) communicate progress with all stakeholders (4) Ensure risk assessment is in place and measure required (5) Manage resolution of problem arising and (6) maintain the project plan and scope. The project manager should also be working closely in coordinating the project with the business owner and business sponsor (Glaser 2004, 35). Project manager should also identify agents of change and come up with a plan (Ciric & Rovic 2004: 26).

#### 4.3.3 Committee

**Project steering committee.** It is responsible for providing leadership in managing all activities that involves the project. It has a mandate to make logical decisions toward changing the way the project is executed. In addition it has a duty to resolve issues that cannot be resolved by the project team. Finally, it acts as communication platform to both leadership and the project team. This committee is chaired by the business sponsor

(Glaser 2004: 35)

**Project team.** According to Glaser (2004) the project team has the following responsibilities (1) project work management (2) day-to-day issues solving (3) allocation and managing resources required for work (4) work closely with the business owner and steering committee to communicate and resolve issues arising. It is important for the team to understand their objectives (Ciric & Rovic 2004: 26). Table 4 summarizes the roles and responsibilities in IT projects.

#### 4.3.4 Project charter

The charter is the project's reference that describes the project purpose , scope and the timeline for the project. In addition it elaborates the individual and functions roles and responsibilities required to execute the project. The charter has 3 objectives as it (1) ensures, that the project goals, planning assumptions are discussed and resolved. (2) keeps participant on track, cost and in time line (Glaser 2004).

#### 4.3.5 Project plan

The project plan provides the detailed tasks, phase timeline and resources for the project. It is a tool used for running of the project by the project team (Glaser 2004: 36). Project plan is a key factor in project management. It defines the breakdown of the project into work packages to enable spread responsibility and accountability across more people. And as a result, project management becomes easier. The plan should be well documented and filled as the project progresses

<b>Roles</b>	<b>Responsibilities</b>
Business sponsor	<ul style="list-style-type: none"> <li>-funding and provide resources</li> <li>-make final decision and accountability</li> <li>-define deliverables</li> <li>-remove business obstacles</li> </ul>
Business Owner	<ul style="list-style-type: none"> <li>-represent departments in committee &amp; project team meetings</li> <li>-secure and coordinates project</li> <li>-remove business obstacles</li> </ul>
Project Manager	<ul style="list-style-type: none"> <li>-identify and obtain resources</li> <li>-communicate progress and maintain project scope and plan</li> <li>-ensure risk assessment of the project and take measures</li> </ul>
project committee	<ul style="list-style-type: none"> <li>-resolve changes</li> <li>-communicate with organizational leadership</li> </ul>
project Team	<ul style="list-style-type: none"> <li>-project work management, day-to-day-issues solving</li> <li>-allocate work resource required</li> <li>-maintain project scope and plan</li> </ul>

Table 5. Role and responsibilities in IT Project (created by author

The tasks are arranged in orderly manner that create various stages that act as core for the project planning (Milis & Mercken 2002: 105-110).

Regardless of all the aspects mentioned above regarding project management other factors needs to be considered. Project definition requires enough experience and knowledge. At least the knowledge on user requirement, exact information needs of the management and IT experts on business strategy. Running short in any one of these tends to end in failure of ICT projects. To impact the quality of the project defini-

tion can be improved if the goals are clear and concrete. The goals should be realistic and agreeable by everyone. In addition the goal is concurrency whereby all parties participate and agree on goal definition (Milis & Mercken 2002: 108).

Good selection and justification should be the base of any ICT project as presented by (Milis & Mercken 2002: 106). They suggest the following guidelines to come up with a good and justified selection. Firstly, it is important to adjust the IT strategy to run in parallel with business strategy. Secondly, it is helpful to consider projects in small phases with a limited time line to ease access and control. Thirdly, it is preferable to familiarize with organizations which have similar projects and learn from the procedures used.

Project resource allocation is another factor that needs to be given a priority in order to successfully manage IT implementation. Milis & Mercken (2002) argue that the top management involvement in the IT project should concentrate on increasing resources to cater for the process in all areas. Table 6 summarizes other success factors that need attention in IT implementation projects.

Category	Success factors in IT implementation projects
Good selection	<ul style="list-style-type: none"> <li>- Align IT strategy and business strategy</li> <li>- Good selection &amp; justification</li> </ul>
Project definition	<ul style="list-style-type: none"> <li>- Give clear direction of the project</li> <li>- Proper project definition</li> <li>- Early definition of deliverables</li> <li>- clear articulated goals</li> </ul>
The project plan	<ul style="list-style-type: none"> <li>- Detailed specification of individual steps</li> <li>- Both long-term plan and execution</li> <li>- Working document which is filled as project progress</li> </ul>
Management involvement and support	<ul style="list-style-type: none"> <li>- Top management support</li> <li>- It is essential regardless of the system</li> <li>- Adjust IT strategy parallel with business goals</li> <li>- prioritize the urgency of the project</li> <li>- Involves the participant through early communication</li> </ul>
Project resources	<ul style="list-style-type: none"> <li>- The resource dedicated to IT and organizational dedication</li> <li>- Top management support</li> <li>- Sufficient resources and change management resources</li> </ul>

Table 6. Success factors in IT project implementation (created by the author)

#### 4.4 Methods of involving Participants in Change Project

The backbone of information systems development is the active participation of stakeholders during the implementation process. For a project to be successful, an organization must facilitate communication, learning and negotiation between the system designers and all stakeholders. Active participation plays different roles including (1) enhancing the acceptance of the system (2) providing an environment for constructive negotiation (3) creating the state of ownership (4) reducing the resistance to implementation and (5) building the commitment in the organization (Roberts, Tom L, Jr; Leigh, William; Purvis, Russell 2000, 78). User participation is an effective way to recognize and fulfil the needs of the users. It may create commitment to the project (Millis & Mercken 2002: 111).

Ćirić & Raković (2010) argue that, during the information system implementation projects the organization frequently experiences resistance to change from most of the potential users of the system. This is caused by response of the changes expected due to the intended influence of the new system and lack of involvement. In addition they suggested that it is important to identify the employees who will participate in a change process and consequently invent the way to change their behaviour and attitude to work in the project

Watson identifies ways of dealing with resistance by first recognizing who is bringing the change. He suggests that the persons involved in a project experience less resistance if they feel the ownership of change and if they feel the unreserved support of top management. Secondly, Watson argues that knowing what kind of change is coming is always necessary. Resistance will be smaller if the change will reduce their burden, if the change will offer experience to the participants, and if they feel their security is not threatened. Finally, Watson came up with a procedure of eliminating resistance to change. By involving the in the diagnostic section to come up with a common decision, opponents are able to empathize with proponent to recognize the valid objections and relieve unnecessary fears especially when their feedback is considered (Watson 1986: 19).

Literature has come up with factors and methods of involving participants in change project in order to minimize the resistance. These methods include; Communication, Training, Empowerment, Motivation and Negotiation and are discussed next.

## Communication

Effective communication is critical for effective change management. Improper communication will deny employees the chance to know what changes have been made or for what purpose. (Ziemba & Obłąk 2015: 51). It involves various methods of communication in coordination of goals and activities of a new system and more so maintains a good communication to all members involved with planning and implementation of a new system (Pitman 1994: 40).

Enhancing communication among system implementation process stakeholders reduces the risks of shortcuts and mistakes hence ensuring quality of service and helps in control and in project management (Roberts, Tom L, Jr; Leigh, William; Purvis, Russell 2000). To enable change to take place executives should use all existing communication channels to broadcast their vision (Kotter 1995: 64).

## Training

Training the participants is one common method used to minimize resistance to change. By training participant gain and understands the logic behind the need of change (Kotter & Schlesinger 2008: 134). The transfer of necessary knowledge is critical factors of any change process in an organization ( Ngai & Gunasekaran 2004: 284)

Implementation without training takes more time, adaptation will be challenging and many other obstacles along the way (Vaughan 2001: 14). To counter these challenges plans to train the people to use the system should be developed.. Successful training components includes; business training, team training, extensive documentation, IT training programs, cross functional and testing training. Knowledge and skills help the understanding of the ICT projects. By teaching the users the skills to use the new technology in doing the work, improves their knowledge on the project. The amount of time spent in training the users shows a positive outcome (Millis & Mercken 2002:111).



## Empowerment

Alasdi( 2014), defines empowerment as the permission given to subordinate to enable them make decisions in an organization. By empowering those who are expecting change boost their motivation by recognizing their role in change process-Pitman encourages early involvement of all users that will be affected by the change. There should be direct participation through sharing responsibilities to everyone involved for the success of new systems (Pitman 1994: 40).

Kotter & Schlesinger (2008) argues that, to forestall resistance the leadership must actively encourages the people to be affected to become part of the solution especially in planning and execution of change.

## Motivation

To implement and utilize any IT or information system, the workforce needs to be motivated to work in a conducive environment where there is open communication (Ngai & Gunasekaran 2004: 284).

The organization introducing a new system should also prepare for rewarding system to encourage users to use the new system. This should be done in the initial stage and communicated to all participants of the project. During development and implementation recognize the participant and reward in their quest of reinforcing and supporting the new system (Pitman 1994: 40).

In successful transformation of change Kotter suggests introduction of rewarding system that can be used in appreciating a job well done by the participant of the project. He suggest different ways of rewarding which includes ranking of an individual to higher position in an organization or awarding bonuses (Kotter 1995).

## **Coercion**

The manager might be coerced to force the resistor to accept the change by either transfer threats to be moved to other departments or promote in higher position in order to accept the changes (Kotter & Schlesinger 2008: 137).

## **Negotiation**

Kotter & Schlesinger (2008:136), claim that another method to involve people is to persuade them by offering special compensation to the people resisting change). Kuruppuarachchi (2002: 133) claims that a broad and strategic decision making process as opposed to narrowly operation calls for initial stage involvement of the all employees in the duration of change.

The management involvement and support is a necessity in the implementation of IT systems. It helps to obtain sufficient knowledge to make a well founded decision when called for. Also the support influences the other functional managers and helps the project team to ease the negotiation regarding the project. (Susan, Brown, Norman, chervay & Reinikie: 2007). Table 6 below summarizes the methods for involvement of participants in a change process.

Methods of involvement	Participant Involvement in change process context according to literature
Communication	Multiple channels are used with sufficient volume to communicate the change vision, project progress, concerns and any other change project issues. This communication reaches everyone in the organization and is continued throughout the change effort. Open and free discussion is enabled, and feedback to be acquired and considered.
Training	Training is provided to users, top management and IT workforce alike. The users need to understand the new processes, system use, and how their actions affect other processes and other parts of the organization. The skills and knowledge improves participation in the project process.
Empowerment	All people affected by the change have an opportunity to directly contribute the solutions being implemented. The participation can be either direct or representational. The participation should be planned, in terms of timing, content and participants for each session. The participants should receive training to be able to contribute effectively in the workshops. Relevant information from the participation should be incorporated into the change plan.
Negotiation	By involving in diagnostic section to come up with common decision, opponents are able to empathize with proponent to recognize the valid objections and relieve unnecessary fears. and if feedback is taken into account .
Motivation	The vision and related practical goals are appropriate and desirable for the Organization. Management systems and organization policies are changed to encourage new behaviors and discourage change resistance behaviors
Coercion	Forcing people involved to accept change through ways of threatening and manipulation. Sometimes can be the only option left if other methods do not succeed and speed is necessary to change.

Table 7. Summary of methods of involving participants in change process

As can be seen in Table 7, the different methods for engaging the stakeholders in the implementation process which are critical as well as factors that need to be considered in the framework of this thesis.

#### 4.5 Conceptual Framework

The previous sections described the key elements of the literature review concerning this thesis such as implementing IT system aspects. This section presents the summary and puts the information into a framework to be used as a reference for building the implementation plan proposal. Figure 8 presents the conceptual framework (CF) of this study.

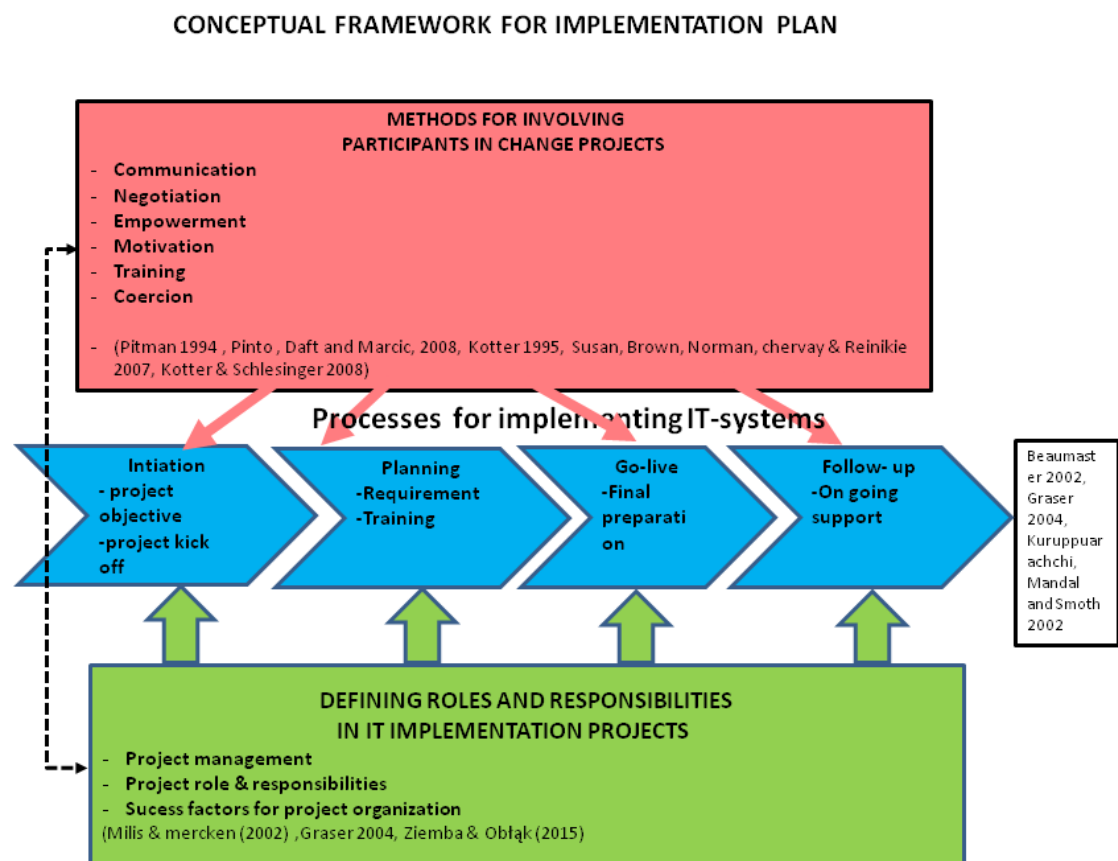


Figure 8: Conceptual Framework.

As can be seen in Figure 8, the conceptual framework of this thesis is based on three IT implementation elements: The implementation process, methods of involving participants in change projects and defining roles and responsibilities in IT implementation projects.

In particular, this means looking at IT system implementation as a process and a project with phases from initiation, planning, execution and follow-up that suit the organization requirement for introducing a new system.

In addition, considering that the introduction of a new system will change the ways people do their work, it is wise to facilitate the methods of engaging the people involved in order to ensure the acceptance or adoption of the new system. This study has considered methods of involving the participants to address both weaknesses. These methods include effective communication, empowerment, training, motivation and decision making as explained in Table 6 in 4.4 section of this document.

Finally, to ensure the systematic implementation of any project it is of great importance to define roles and responsibilities. Therefore, when these two elements, i.e. methods of involving the participants in change projects and defining roles and responsibilities are integrated in the IT implementation process in the lifecycle of implementing mSiisti in the case company, the outcome will be a successful implementation plan.

This section collected the concepts from existing literature to identify the best practice for involving participants in change projects as well as defining roles and responsibilities in the IT implementation project related to the case company challenges. The next section uses the Conceptual Framework together with the results of the CSA to build the mSiisti implementation plan proposal for the case company.

## 5 Building Proposal for the Case Company

This section combines the findings of data 1 collection and the Conceptual Framework to build the implementation plan proposal. The section builds on the analyzed interviews summary and the researcher's own observations supported by key insights from best practice. The findings from the second data collection will be considered in building the initial proposal.

There were four weaknesses identified through the Current State Analysis. These were lack of improper training, general resistance to change, lack of involvement and unclear roles and responsibilities. The first three were categorized as one element after the literature review and best practices identified their cause as lack of involvement during the implementation. Accordingly, to successfully implement mSiisti, the Conceptual Framework was based on the three elements, i.e. Implementation process, Methods of involving participant in a change project and defining roles and responsibilities in an IT implementation project.

Based on the issues raised in Current state Analysis and the best practices from the Conceptual Framework, the implementation process foundation was created. Data 1 findings suggested an orderly ways of implementing mSiisti in steps within a given period. The implementation process concept required support and definition of roles and responsibilities aligned with each stage along the suggested timeline. In addition, the process concept required methods of involving the participant in the change process.

The next subsection discusses how these three elements were used to build the implementation plan proposal.

## 5.1 Data 2 Findings

This section presents briefly the interrelationship between the Current State Analysis and Conceptual Framework elements used to gather Data 2 from the respondents. Table 8 below describes briefly some of the suggestions which emerged from the discussions.

CSA	CFW	Data 2 Challenges	summary suggestions
Lack of involvement	involvement	which methods to use to involve stakeholders	Team leader suggested early communication would make everyone alert of what will be coming and people get ready of changes Service manager encouraged more meetings and collectively work together
Unclear role and responsibilities	define roles and responsibilities	How to delegate roles and responsibilities	The Service Coordinator suggested that the roles will be defined and activities shared according to the job description in the case company
Improper training	training	What to train and how	Team leader suggested to bring an IT Expert to care for training sessions
General resistance to change	train, communicate and involve	How to reduce resistance	A cleaner suggested encouraging motivation and sometimes forcing people to accept changes

Table 8. Summary of proposal suggestions

Table 6 summarizes some suggestions that will be used to build the proposal in the next subsections.

## 5.2 Establishing implementation project stages

The establishment of the implementation project stages was discussed during the second data collection and the respondents consulted works in the case company and play major roles in operations where mSiisti will bring changes. The participants were Service Coordinator, Field Manager, Team Leader and a Cleaner. Those who were out of reach were not consulted.

The implementation process was divided into four phases and each one was assigned activities to be carried out. These phases are Project start, Planning, Execution and Closing phase as shown in Table 9 below.

<b>Project start</b>	<b>planning</b>	<b>Execution</b>	<b>Project close</b>
<ul style="list-style-type: none"> <li>- Assigning project manager</li> <li>- Identifying key stakeholders</li> <li>- Resource commitment</li> <li>- Kick-off meeting</li> </ul>	<ul style="list-style-type: none"> <li>- User requirement definition</li> <li>- project management plan</li> <li>- Core Users training</li> <li>- Data preparation</li> </ul>	<ul style="list-style-type: none"> <li>- Data migration-testing</li> <li>- End-users training</li> <li>- Monitor and review progress</li> </ul>	<ul style="list-style-type: none"> <li>- Post implementation review</li> <li>- resolutions and outstanding issues</li> <li>- Create a culture</li> </ul>

Table 9. Implementation phases

### **Project start Phase**

Project start phase will specify and outline the intended goals for the mSiisti project. At this stage the management will be encouraged to spread the news to everyone in the case company on the development of the project revival. The main goal at this point will be to formally select and start the project afresh. The key activities expected at this stage are to assign and identify the key stakeholder, assign the project manager and commit resources by the executive.

At this point the kick-off meeting will be held by the business owner that will notify all employees the project has started. The objectives of the kick-off meeting are to: (1) Address the purpose of the project, the scope, the major deliverables and their dead-



lines, (2) Discuss the major roles and responsibilities of the project team, (3) Discuss the project management procedures, (4) To ensure the project is officially started.

### **Planning Phase**

This phase is where the mSiisti implementation will be scrutinized to cater for the finer details. This will enable the project team to measure the ability and capability of the case company to implement mSiisti at its current status. By doing so the team will be evaluating the resources available, the skills, and the technological knowhow that is available and how any missing component necessary can be acquired. The team will further evaluate the task and activities to be carried out during the implementation process. Some of the tasks mentioned by respondents include, RFID tag distribution, customers Work program entry, core user training and end user mobile application training.

As identified previously, Improper training was one of the weaknesses revealed by the CSA. According to the interview respondent the training was not consistent and users were forced to learn from each other. To solve training weakness in the case company training should be provided to both the management and the end-users. The core users need to understand the new process and the systems itself. There should also be enough time reserved for training to enable users to gain skills and knowledge. The participant should receive training to be able to contribute effectively to the implementation process. The relevant information from the participation should also be considered and incorporated in the change plan. A project plan will be created outlining the way mSiisti will be deployed to different customers of the case company at given timelines and activities that go along with it.

Once the project team has outlined the timeline and identified the tasks the necessary parameters of planning process is done. This will be a good time to identify anything that might be an obstacle to the successful completion of mSiisti implementation. Any potential obstacle will be considered and action to be taken suggested.

In addition the project stakeholders will be defined and the communication plan established explaining the means to be used to ensure the team members have access to all information necessary for the project. After all this is done, mSiisti is ready to be redeployed

## Execution Phase

The third phase was suggested to be the execution phase, whereby the customer project plan will be put into motion and work of the project performed. The RFID tagging system will be distributed to customer's premises, work program will be entered to the systems, end-users will be provided with compatible phones and finally trained on how to use the phone application.

It was suggested that, during this phase, it is important to supervise and cooperate as required. This will help to monitor progress and adjust the plan if needed as well as document the changes done. It was also recommended to be holding meetings to enable the project manager compare the progress reports using the information gathered during implementation.

Throughout this phase, project sponsors will be enlightened on the progress of the project. Once all the deliverables have been produced and when the project sponsor accepts, the project will be ready for closure.

## Closing Phase

During this phase, it was suggested to release the final mSiisti deliverables to the project sponsor and steering committee. The project manager will present the deliverables to the sponsor and ensure there are acceptable according to plan and if any pending issue will be well documented.

The post implementation review will be carried out by evaluating how the process sailed through. What problems were there, how there were solved and to find ways of improving. The evaluation was suggested to be carried out by project manager and figure out which methods or will be used for that purpose.

The last step will be to conduct lessons learned workshop with entire steering committee to review some aspect of project. This will help to capture lesson learned in mSiisti implementation, documenting and analyzing feedback on events that might help future projects and also in creating the culture of using mSiisti in the case company.

This session will bring the project closure by providing team member a chance to discuss success, identify areas that could have been improved and provide recommendation for the use of mSiisti.

### 5.3 Defining participants, roles and responsibilities

The CSA identified was unclear roles and responsibilities as one of the weakness in mSiisti implementation. To ensure that the project works as efficiently as possible it is important to have clearly defined job roles and responsibilities. This is important in projects to ensure no part of the workload is overlooked. The roles and responsibilities need to be defined in early stage of the project, and even more at the beginning of each phase of the project. To clearly define roles enables team member to know what their specific tasks are and hold each accountable for those activities. The role and responsibilities will be aligned with project management phases as well as to clarify the methods to be used to involve participant.

In this study the researcher had discussions with respondents about the importance of getting it right at the initial stages of the project. The reason behind the emphasis was that the success of the mSiisti project will have both positive and negative results to some of the stakeholders. According to the set up and operational functions of the case company closely correspond with the features of mSiisti system, hence easier to relates the roles and the responsibilities with some job description in the case company.

The company structure itself is self explanatory who should be involved in this project, As per design of this system (mSiisti) and job description of management fit together. And of course, we understand who should be the project owner (Sponsor), of this project, the rest is only to emphasise on who do what (Informant's 2c response, Data 2).

The following are the definitions of suggested roles and responsibilities with regard to msiisti project:

#### **The sponsor.**

The sponsor was identified as the Chief Executive Officer (C:E:O) of the company who also happens to be the case company owner. She will be the sponsor champion of the mSiisti project by serving as spokesperson to gather support throughout the case company and promote the benefits mSiistii will bring. The sponsor will play a major role in developing the initial phase by outlining the objective of the project and also committing the resources required. In addition, the sponsor will provide leadership and direction to the project team, and ensure the project is in controls. The sponsor will also provides informed decisions to ensure the project within the scope intended for. The sponsor will

also be accountable for issues that will be beyond the project manager. The sponsor have the ability to authorizing changes in scope, participates in post implementation review and give permission to proceed or not to proceed when risks are high, e.g. when the resources exceed or the feasibility of the project fades away.

### **Project manager**

The project manager was suggested to be the current Service Coordinator. The service coordinator portfolio and job description in the case company fits the role that will be taken by the project manager. In addition the Service coordinator facilitated the first mSiisti implementation attempt and has a lot of understanding on mSiisti. The project manager will be responsible of all aspect of the project including,

- Allocating team member their areas of jurisdiction
- developing customer's delivery plan
- monitoring the schedule and plan
- providing accurate and timely reporting
- Arrange the team member training
- ensure the data required is available on time
- requirement and process definition
- chair team meetings
- facilitates communication

### **Project team**

The project team will comprise of the core users and any other people in the management who would utilizes the mSiisti reporting output. The project management team core users will include the Field Manager, Human resource Manager, Executive Assistant and Service Coordinator who was initially suggested to be the project Manager.

The team members were carefully selected due to their operational role in the case company. The Field managers will be core users and beneficial of the mSiisti implementation success. mSiisti will ease their shift management and also track their respective workforce and all the matters related to customer premises reporting. The Service Coordinator will also be able to coordinate day to day service provision from all different departments. The Human resource manager will as well be on the team for her role

in ensuring the work force affairs are well articulated in the project meeting as well as in the system itself. The Human Resource Manager is also responsible for the payroll system in the case company and will be the one using the mSiisti output in terms of monthly hour list for the work force. The Executive Assistant who also plays a role of Finances in the case company will be in the team for the same reason as the Human Resource manager, to benefit from the mSiisti output reporting. The reporting will be used to bill the customers and it is very important to have that portfolio in the team meeting as it will eventually ease the job. The project team responsibilities will be producing deliverables as initially proposed in the project plan and authorized by the Project manager. Their tasks will include;

- The end-user requirements under their given areas, checking whether there is RFID tagging system in customer premises. If not deliver and record the serial numbers in the system.
- Delivering the Individual tagging systems to the end-users
- Participating in learning the system so as to understand the system
- Training the end-users how to use mSiisti mobile application
- Data preparation and migration from paper to the mSiisti system
- Allocating shifts to the end-users in the system
- Monitoring the progress and giving the feedback at the project meeting

### **Steering committee**

The steering committee includes the project sponsor i.e the CEO, Service Director, Service Coordinator, Human resource Manager, Financial Assistant and Field managers.

The responsibilities include initial description of project scope, oversight and control, Promoting mSiisti project throughout the organization, approving project deliverables, evaluating the project progress and also resolving any other issues that might arise. Table 10 below describes the proposed roles and responsibilities for the case company.

	<b>Roles</b>	<b>Participants</b>	<b>Responsibilities</b>
1	Project sponsor	Chief Executive Officer	provide Leadership, authorize change, commit resources, provide direction
2	Project manager	Service coordinator	<ul style="list-style-type: none"> <li>Allocating team member their areas</li> <li>developing customer's delivery plan</li> <li>monitoring the schedule and plan</li> <li>providing accurate and timely reporting</li> <li>Arrange the team member training</li> <li>ensure the data required is available on time</li> </ul> requirement and process definition chair team meetings
3	Project Team	Service Coordinator, Human Resource Manager, Financial Assistants, Field Managers	<ul style="list-style-type: none"> <li>The project team responsibilities will be producing deliverables as proposed in the project plan and as authorized by the Project manager. Their tasks will include;</li> <li>The end-user requirements under their given areas, check whether there is RFID tagging system in customer premises if not deliver and record the serial numbers in the system</li> <li>Deliver the Individual tagging systems to the end-users</li> <li>To participate in learning the system so as to understand the system</li> <li>To train the end users how to use mSiisti mobile application-Data preparation and migration from paper to the mSiisti system</li> <li>allocating shifts to the end-users in the system</li> <li>monitor the progress and give the feedback at the project meeting</li> </ul>
4	Project Committee	C.E.O, Service Coordinator, Human Resource Manager, Financial Assistants, Field Managers, Service Manager	<ul style="list-style-type: none"> <li>Initial description of scope</li> <li>Oversight and control</li> <li>champion the project</li> <li>approve deliverables</li> </ul>

Table 10. Summary of roles and responsibilities.

#### 5.4 Suggesting ways to involve stakeholders in the implementation project

The CSA identified general resistance as one of the weakness in the mSiisti implementation; accordingly the literature provides the lack of involvement as the major cause of resistance but also suggest engagement as a remedy for this particular weakness. By involving and educating all the users, it is possible to reduce change resistance in the case company towards the implementation. This demands that all people affected by the change have an opportunity to engage with the solution being implemented. The engagement can be either direct or representational. The engagement and participation should be planned, in terms of timing, contents and participation for each stage in the implementation process

Several ways were suggested for involving the stakeholders in the implementation of mSiisti into the case company. The methods suggested varied in different phases of the project and also depended on the activities that were to be carried out by different stakeholders. According to the case company and the kind of project intended to be implemented a top down change project approach was considered for the involvement of the participants. The acceptance and support of mSiisti in the case company, including the cleaners who have no direct contact with the executive of the company is critical.

To accomplish acceptance and support, the sponsor who is the executive in the initial phase of the project must seek help from the middle management who are capable of delivering the change to the field managers. Once the Field Managers are on board they engage the team leaders and cleaners and communicate the purpose and the value of change which will result from the successful implementation of mSiisti. By so doing this will allow everyone in the management to become a champion of the project by empowering all management with some of the sponsor responsibilities. At this phase the executive will be encouraged to broadcast the initiation of the project to the entire organization through an email or any other relevant channel to every individual as suggested by one of the respondents:

“I think it is important for CEO to emphasize this project by directly sending emails to all cleaners about the start of the project and ask them to cooperate., this will make people to take this mSiisti even more seriously” (Informant’s 2c response, Data 2)

In addition to the previous ways in the initial phase, the executive could motivate the stakeholders with a promise of rewards in terms of a bonus or even pay increase if the project succeeds. This will boost the individual spirit for most of the individuals who might be looking for that reward.

In the planning phase, the stakeholders will be encouraged to fully participate and take ownership of the mSiistii implementation project and use their influence to support the sponsor's desire for change. This will need a clear communication channel to advocate the potential change. The stakeholders will be encouraged to persuade others to support the change.

Training of the core users will happen in this phase and there was a suggestion to bring in an IT expert from the company which had developed mSiistii, to take on the session. It was noted that, it is very necessary for the users to properly understand the knowledge and skills required to use mSiisti effectively. The training methods should be made interesting to the users and arranged in both a theoretical and practical manner. In addition, sharing of responsibilities will be necessary to first get the stakeholders to work and make them part of the project. This will empower the stakeholders by knowing they are accountable for their activities.

During the execution phase everybody in the case company will be directly involved with the mSiisti project either in a steering committee or as end-users. It is important to maintain control and communication due to the increase in numbers of the people involved. The stakeholders will be encouraged to give feedback on the progress of the implementation in meetings and anytime any concerns arise. As the participants carry out the tasks, communication will be highly encouraged through all means possible.

At this stage the influential people will be used to create networks among employees within organization to engage and support mSiisti in the case company. They will be using social media to influence others and establish the network that will definitely change people's mindset and acceptance of the system.

The sequence of involving the stakeholders in the mSiisti implementation will start by engaging through participation and this will definitely make them part of the decision making process and boost their commitment. If engaging does not work negotiation will be encouraged to influence the stakeholders on the requirements and benefits of



mSiisti. There is also a third option of motivation through reward and promising incentives and the last option left on the table, when all other methods have been given a try, is coercing. The stakeholder will be forced to use the system or get isolated from the case company for the change has to take place.

## 5.5 Summary of proposed plan

The initial proposal, shown in Table 11, is built from the information gathered from the Current State Analysis, best practices and discussions from stakeholders.

The initial implementation plan proposal has integrated the methods of involving participants and each and everyone in the case company. In addition, responsibilities are distributed throughout the case company as can be seen in Table 11.

Phases	Methods of involving	Responsibilities
<b>Start phase</b>	<ul style="list-style-type: none"> <li>• Communicate the project purpose</li> <li>• Empower management by sharing some responsibilities</li> <li>• Broadcast the mSiisti statement directly to individuals</li> <li>• Motivate stakeholders with rewards</li> </ul>	<ul style="list-style-type: none"> <li>• Provide Leadership</li> <li>• Authorize change</li> <li>• Commit resources</li> <li>• Provide direction</li> <li>• Give the timeline</li> </ul>
<b>Planning</b>	<ul style="list-style-type: none"> <li>• Use clear communication methods</li> <li>• Provide training session from an IT Expert</li> <li>• Empower through sharing tasks</li> <li>• Establish relationship networks within the team and entire organization</li> </ul>	<ul style="list-style-type: none"> <li>• Allocating team member their areas</li> <li>• developing customer's delivery plan</li> <li>• monitoring the schedule and plan</li> <li>• providing accurate and timely reporting</li> <li>• Arrange the team member training</li> <li>• ensure the data required is available on time</li> <li>• requirement and process definition</li> </ul>
<b>Execution</b>	<ul style="list-style-type: none"> <li>• Encourage feedback</li> <li>• Make alliance to influence change</li> <li>• Use social media and other available channels</li> <li>• Empower stakeholders by engaging in decision making</li> <li>• Negotiate the benefits of msiisti</li> <li>• Force the stakeholder if other options fails</li> </ul>	<ul style="list-style-type: none"> <li>• The project team responsibilities will be producing deliverables as proposed in the project plan and as authorized by the Project manager. Their tasks will include;</li> <li>• The end-user requirements under their given areas, check whether there is RFID tagging system in customer premises if not deliver and record the serial numbers in the system</li> <li>• Deliver the Individual tagging systems to the end-users</li> <li>• To participate in learning the system so as to understand the system</li> <li>• To train the end users how to use mSiisti mobile application-Data preparation and migration from paper to the mSiisti system</li> <li>• allocating shifts to the end-users in the system</li> <li>• monitor the progress and give the feedback at the project meeting</li> </ul>
<b>closing</b>	<ul style="list-style-type: none"> <li>• Communicate the status of project</li> <li>• Recognize the effort of job done</li> <li>• Motivate the outstanding performers of the project</li> <li>• Encourage the use of the system</li> </ul>	<ul style="list-style-type: none"> <li>• Post implementation review</li> <li>• Resolutions and outstanding issues</li> <li>• Create a culture</li> </ul>

Table 11. Proposal implementation pan

In the next section, the implementation plan proposal will be fine-tuned and validated.

## 6 Validation of the Proposal

This section discusses how the proposed implementation plan was validated and what type feedback was given by the stakeholders.

### 6.1 Findings of Data 3 Collection

The initial implementation plan proposal was presented to Service Director in two sessions. The first session was conducted in a Helsinki city restaurant and was a briefing on how the study has been conducted and the layout of the initial implementation plan. The second session was held in the case company office in Vantaa where the proposal implementation plan based on Data 2 was discussed with the Service Director and the finding formed Data 3 collection stage.

The feedback is summarized in Table 12 below. The feedback is grouped into three distinctive reaction of comments, positive, neutral and constructive criticism

Stakeholder	Reaction	Description
Service Director	Positive	(1) "It look good" (2), This what I was asking the girls(meaning ladies who attempted to facilitate implementation) to initially. (3) This is going to work
	Neutral	"we cannot immediately implement this we have some technical issues & resource issues to solve"
	Constructive criticism	" Can you also ensure the IT expertise gap is closed cause we had an issue with it, especially in training"

Table 12, Summary for Data 3: Feedback for initial implementation plan

As seen in table 10, the Service director appreciated the work done in the initial implementation plan and there only few concerns to consider. Based on Data 3, the initial implementation plan was revised. The next sub section will present a final implementation plan with some concerned mentioned considered.

## 6.2 Final Proposal

The final implementation plan for mSiisti in the case company is just like initial implementation plan in Table 9. As there no much change between the initial and final implementation plans in Appendix 2 as well as can be seen in Figure 9 below.

### MSIISTI IMPLEMENTATION PLAN PROPOSAL

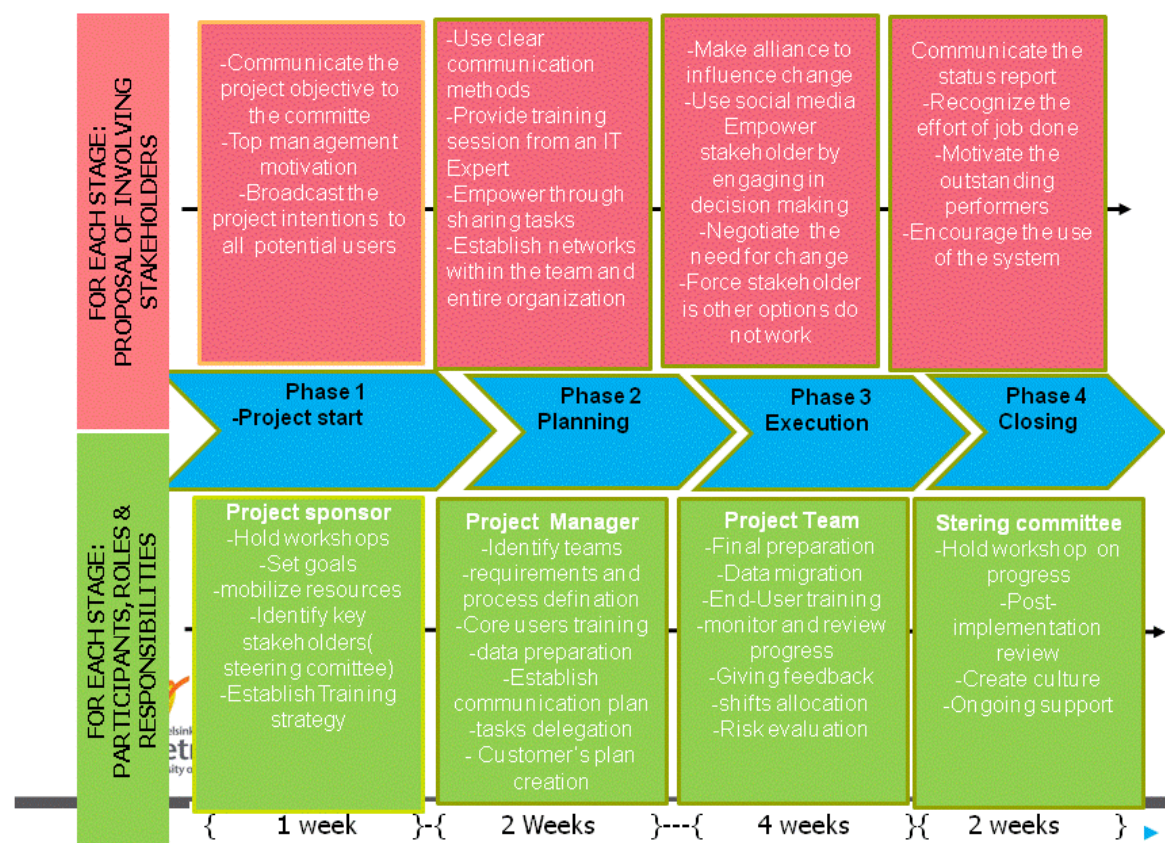


Figure 9. Overview of mSiisti Implementation plan proposal.

As can be seen in Appendix 2 the only changes were inclusion of the participants which were omitted initially and the inclusion of the timeline on each stage. The more details implementation plan proposal can be found in appendix 2 of this document..

### 6.3 Recommendations / Action Plan, etc.

The researcher recommends that, the implementation plan proposal to be tested when the all the resources are available and technical issue concern mentioned in in Data 1 are resolved. Secondly the training of the core users is well executed and their knowledge affirmed by IT expert. Thirdly, before every phase the communication channels should be well defined to everyone.

## 7 Discussion and Conclusions

This section discusses the summary of this study. It also reflects the managerial implication and evaluation of the same.

### 7.1 Summary

The objective of this thesis is to propose a systematic implementation plan to integrate mSiisti into true practical use in order to realize its benefits. The case company has purchased the mSiisti in order to ease the operation of the day-to-day and also help the manager make good decision and monitor the work progress. The way mSiisti was deployed was not planned and that lead to slow implementation. The study has researched on the major reasons and challenges of the failure of case company to fully benefit from mSiistii and therefore the purpose of the thesis fulfill the case company's needs.

The outcome of this thesis is a clear guidelines of an implementation plan, specifying what should be done, by whom and how in different stages of the implementation. The description and guideline are aligned in process workflow with role and responsibilities at each stage defined and the methods that will be used to involve the users at each stage along that process also defined. The outcome was not tested within this study due to the tight schedule but will be done afterward.

The Outcome has emphasized much about roles and responsibilities in the description as well as user participation to outline the necessity of people in change management aspect in the case company.

The results of the data collections from employees' interviews and discussions, were used to build the implementation plan for mSiisti specifically for the case company. Although it can be utilized for other IT systems in the case company if necessary and only minor adjustment can be considered.

## 7.2 Practical/ Managerial Implications

This study will solve a significant challenge in the case company. The usage of mSiisti in the case company have almost stalled or somehow failed. The users are not using the system and the one who are using it are doing it with no guidelines.

This study has produced a proposal of implementation plan to tackle the issues currently which are been experienced in the case company. The implementation proposal have outline the role and responsibilities as well as the method to ensure everyone get involved for easy and well coordinated implementation process. As a result of this study the case company administration and manager have the tool to follow when they start the implementation afresh.

Hence this study recommends the following actions to be taken by the management

- Dedicate appropriate resources, by ensuring there is enough time, hardware and software support during mSiisti implementation
- Communicate the need of change clearly and in timely manner to everyone will be affected by change
- Ensure all people that will be affected by change have an opportunity to affect the solution being implemented.
- Ensure the roles and responsibilities are clearly defined and communicated during the process.
- Decide on testing the mSiisti implementation process

When this is done and project is kick started again according to the guideline mSiisti will become the culture of the case company. In addition, the project must be acceptable to the management and ensure it does not add more tasks to their busy schedule after implementation and consequently might demand for management to have position in the management to only deal with mSiisti operations

### 7.3 Evaluation of the Thesis

This study was conducted in an orderly manner to enable the outcome, proposed implementation plan to meet its objective. The research design was clearly followed and was systematically created to meet the purpose. The researcher approached the respondent with the open question concerning mSiisti implementation during the interviews to really understand the challenges in the Current State Analysis. The findings from Current State Analysis gave a clear picture what was affecting the implementation and formed a foundation of the literature review. The literature review was widely conducted to get the best practices in the subject.

This study can be used to implement another IT system in another organization as long as the challenges of the system to be implemented could be the same. And if used will be customized to their management structure.

#### 7.3.1 Outcome vs Objective

The objective of this thesis is to propose a systematic implementation plan to integrate mSiisti into true practical use in order to realize its benefits as described in section 1.3. The outcome of this study was a proposal of systematic implementation plan to intergrate mSiisti in the case company as provided in Section 6.2. When comparing the outcome to the objective, the result is that they make a perfect match.

#### 7.3.2 Reliability and Validity

Reliability is an extent to which the study would yield the same result if repeated several times. To ensure reliability in this study the researcher interviewed and held discussions with the people involved with the implementation attempt of the mSiisti. In addition the researcher tried to cover all functions of the case company. All the people were presented with same question to get a clear understanding of the implementation challenges facing mSiisti. All the respondent did not answer the question the same way and other left some unanswered. Nevertheless the findings were well analyzed for the study even if the study had a limited time.



The validity of the study is the measurement and evaluation of how the study was conducted to deliver an outcome based on the objective. In this study, the methods used were not as effective as supposed to be. Firstly, there were potential respondent who were not interviewed because of linguistic barrier and there might have had important information of this study. Secondly, the open approach of interviews was not one of the best choices because according to the answers received seemed to be the repetitive of other presented questions.

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## Data 1 interview guidelines

Which stage of the project did you get involved in?
What background info was available for Resource management planning system
What were your actual role and responsibilities back then? Did the role remain the same during the Project?
What resources were available?
What were the main reasons to purchase of Msiisti
What did you find to be the biggest strengths in the project
How about where there some things that could have been done better?
What were challenges during implementation.(is there good, training, communication, resistance to change, leadership, planning, resources?)
Did some new major issues rise up during the project
Was something done differently compared to now
Did you need more resources on this coordination?
What were the best practices learned from this project so far

Phases	Methods of involving	Roles	Responsibilities
<b>Project start</b> (1 Week)	<ul style="list-style-type: none"> <li>Communicate the project purpose</li> <li>Empower management by sharing some responsibilities</li> <li>Broadcast the mSiisti statement directly to individuals</li> <li>Motivate stakeholders with rewards</li> </ul>	Sponsor to Sterin comitte	<ul style="list-style-type: none"> <li>Provide Leadership</li> <li>Authorize change</li> <li>Commit resources</li> <li>Provide direction</li> <li>Give the timeline</li> </ul>
<b>Planning</b> (2 Weeks)	<ul style="list-style-type: none"> <li>Use clear communication methods</li> <li>Provide training session from an IT Expert</li> <li>Empower through sharing tasks</li> <li>Establish relationship networks within the team and entire organization</li> </ul>	Project manager to Project team	<ul style="list-style-type: none"> <li>Allocating team member their areas</li> <li>developing customer's delivery plan</li> <li>keeping the project on track in terms of schedule and plan</li> <li>providing accurate and timely reporting</li> <li>Arrange the team member training</li> <li>ensure the data required is available on time requirement and process definition</li> </ul>
<b>Execution</b> (4 Weeks)	<ul style="list-style-type: none"> <li>Encourage feedback</li> <li>Make alliance to influence change</li> <li>Use social media and other available channels</li> <li>Empower stakeholders by engaging in decision making</li> <li>Negotiate the benefits of msiisti</li> <li>Force the stakeholder if other options fails</li> </ul>	Project team	<ul style="list-style-type: none"> <li>The project team responsibilities will be producing deliverables as project plan and as directed by the Project manager. Their tasks will</li> <li>The end-user requirements under their given areas, check whether tagging system in customer premises if not deliver and record the in the system</li> <li>Deliver the Individual tagging systems to the end-users</li> <li>To participate in learning the system so as to understand the system</li> <li>To train the end users how to use mSiisti mobile application-Data p migration from paper to the mSiisti system</li> <li>allocating shifts to the end-users in the system</li> <li>monitor the progress and give the feedback at the project meeting</li> </ul>
<b>Closing</b> (2 Weeks)	<ul style="list-style-type: none"> <li>Communicate the status of project</li> <li>Recognize the effort of job done</li> <li>Motivate the outstanding performers of the project</li> <li>Encourage the use of the system</li> </ul>	Steering committee	<ul style="list-style-type: none"> <li>Post implementation review</li> <li>Resolutions and outstanding issues</li> <li>Create a culture</li> </ul>



## **Title of the Appendix**

Content of the appendix is placed here.